8 What Resources are Available to Help States ?

The Federal Motor Carrier Safety Administration (FMSCA), formerly FHWA, has worked with several partners over the past few years to develop resources to support states planning to deploy Commercial Vehicle Information Systems and Networks (CVISN). These resources include:

- Intelligent Transportation Systems/Commercial Vehicle Operations (ITS/CVO) Training Classes
- CVISN Deployment Workshops
- CVISN Tool Kit
- CVISN Technical and Management Guides
- ITS/CVO World Wide Web (WWW) Sites
- FHWA Outreach and the FMCSA Technology Truck
- Advisory Support.

Collectively, these elements comprise an integrated strategy for providing support to the deployment process. As Figure 8-1 indicates, the objective is to transfer information and lessons learned from folks experienced in ITS/CVO to newcomers to give them the benefit of prior work and reduce cost and risk.

8.1 Training

The FMCSA sponsors a series of three training courses to provide an awareness level of understanding for CVO stakeholders. Approximately six teams of two or three trainers each teach the courses. Teams are used to provide at least two trainer perspectives in each class. The trainers include state managers and technical personnel, university staff, system developers, and consultants. All were chosen for their specific background and knowledge of CVO and ITS. All have been through a comprehensive series of 3-week long "Train-the-Trainer" workshops.

ITS/CVO Training

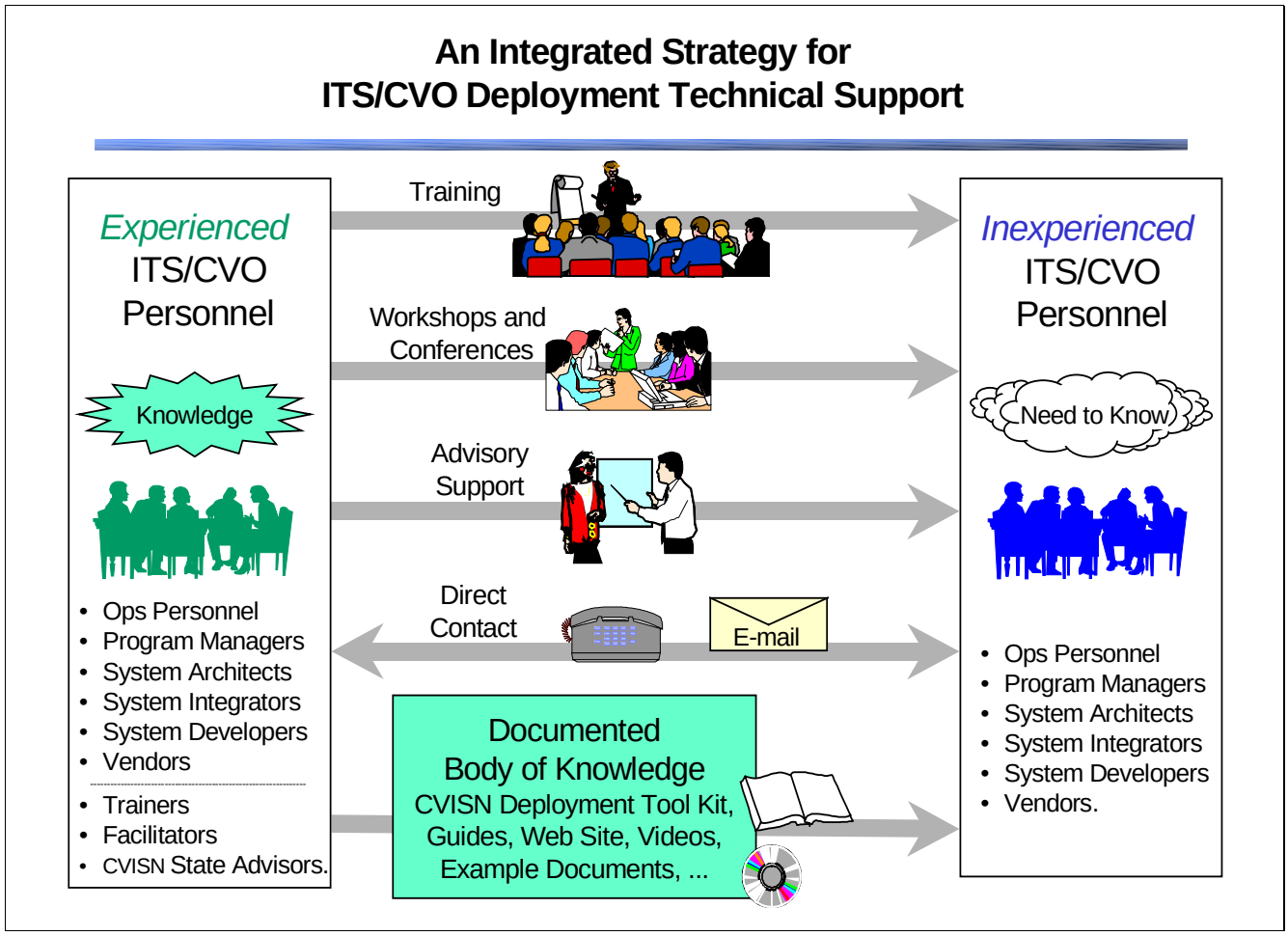


Figure 8-1 Integrated Strategy for ITS/CVO Deployment Technical Support

Courses include short lecture segments along with class discussions and small group exercises. A fictional state, Midland, is used as an example throughout the course series to provide a case study. Students and instructors are also encouraged to discuss their own real-world knowledge and experience. The courses are summarized in Table 8-1.

What Training Materials Will be Provided?

As part of the training, each student is provided with a training notebook that includes a copy of all graphics used in the course and additional reference material.

This notebook provides a very useful reference when the participant begins to work on the CVISN deployment project back in their home state.

The training notebook from each course is available for downloading from the ITS Electronic Document Library (EDL) on the Internet at http://www.its.fhwa.dot.gov/cyberdocs/welcome.htm. The EDL Document Numbers are:

8103 – Introduction to ITS/CVO

8063 – ITS/CVO Technical Project Management for Nontechnical Managers

8143 – Understanding ITS/CVO Technology Applications.

Table 8-1 Technical Training Course Descriptions

Course Title	Introduction to ITS/CVO	ITS/CVO Technical Project Management for Nontechnical Managers	Understanding ITS/CVO Technology Applications
Duration	1 ½ days (12 hours)	2 days (16 hours)	2 days (16 hours)
Content	ITS/CVO program's purpose, structure, components, current and future implementation, and technology	Skills development for managing the design and implementation of ITS/CVO technology	Overview of CVISN architecture and technology, standards, and how to apply them to ITS/CVO
Target Audience	Technical or nontechnical managers and staff from the states, FMCSA, motor carrier industry, and other key stakeholders	Program and other nontechnical managers and staff from the states and FMCSA	Technical and program managers and staff from the states, FMCSA, motor carrier industry, and other key stakeholders
Required for Workshops?	Recommended	Required	Required

8.2 Workshops

The CVISN deployment workshops are designed to help state teams produce specific products including their top-level design description and CVISN Program Plan. They will be offered according to a specific schedule at a limited number of locations. They will include brief introductory lectures followed by hands-on technical sessions, and will emphasize teamwork. The target audience for the workshops is state CVISN program managers and CVISN system architects, state operations and information technology staff, state motor carrier association representatives, and FMCSA field staff.

How Do the Workshops Differ from the ITS/CVO Technical Training Courses?

The ITS/CVO training courses are prerequisites to, not replacements for, the workshops. The second and third courses are required for states that wish to participate in the workshops. Some of the important differences between the training courses and workshops are summarized in Table 8-2. Even though the training course and workshops cover some of the same subject matter, they are intended to support states at different points in the deployment process. They are structured to complement and build on each other, not to provide a choice of one or the other.

Table 8-2 ITS/CVO Training Courses and CVISN Workshops

	ITS/CVO Training Courses	CVISN Deployment Workshops
Purpose	Learn, build awareness and commitment	Produce CVISN Program Plan and state system design
Schedule	Ongoing as needed	Series of 3 workshops over ~ 1 year for a group of states
Format	Mix of lectures, exercises, and case studies	Brief introductory lectures, hands-on technical work sessions
Orientation	Individual	Team
Audience	▪ State managerial staff ▪ FMCSA field staff ▪ Industry representatives (Introduction course only).	▪ Project Manager and Architect ▪ State operations and IT staff ▪ State Motor Carrier Rep (invited) ▪ FMCSA field staff.
Product	Awareness of concepts and tools	State CVISN Program Plan and top-level design description.

What Type of Support Will My State Receive in the Workshops?

The workshops will be designed and led by ITS/CVO subject matter experts from the Johns Hopkins University/Applied Physics Laboratory (JHU/APL), the organization that managed the design of the CVISN architecture and the Model Deployment Initiative (MDI). Members of the ITS/CVO Technical Training Program course delivery teams will provide additional support. These trainers include CVISN Pilot State program managers, ITS/CVO mainstreaming regional champions, and other public and private sector personnel with experience in ITS/CVO. The trainers will be available to work with individual states during the workshop breakout sessions. In addition, other CVISN Pilot State personnel will be available to assist with the workshops in their regions.

Some of the ITS/CVO trainers will also serve as CVISN State Advisors (CSAs). They will be available to make visits to individual states either before the workshops begin or between the workshops, to assist with prework and questions. The amount of time available will be fairly limited due to funding constraints. Nevertheless, this is another valuable resource available to the states.

8.3 CVISN Tool Kit

CVISN Tool Kit

The CVISN Tool Kit is a comprehensive set of technical documentation and planning tools assembled on a CD-ROM to assist states in the deployment of CVISN.

As part of the CVISN MDI, JHU/APL has the task of capturing, recording, and distributing the information, knowledge, insights, and lessons learned that might be of value during and after the ITS/CVO MDI. The collected material will be distributed in the "CVISN Tool Kit" on a standard compact disk. The CVISN Tool Kit will include documentation developed by the states, FMCSA, and their subcontractors.

The documentation on the Tool Kit will be linked to the CVISN Web Site for the user to browse and download the latest versions of material. Although the CD can be used as a standalone tool on your workstation, it is most effective when combined with an Internet browser (Netscape or Microsoft Internet Explorer) used to download updates and other information from the CVISN Web Site.

The tool kit is being developed incrementally with new items to be added as CVISN deployment proceeds. The first version was available in the fall of 1999. The CVISN Tool Kit includes the items listed in Table 8-3. The contents will evolve over time.

Table 8-3 CVISN Tool Kit Content

General CVISN Documents and Standards
▪ Introduction to CVISN
▪ CVISN Statement of Direction (SOD)
▪ CVISN Operational Concept Document (OCD)
▪ CVISN Guides (series of 8)
▪ CVISN Operational and Architectural Compatibility Handbook (COACH) (all 5 parts)
▪ CVISN System Design Description
▪ Lessons Learned Summary - MD and VA Prototypes; CVISN Pilot States
▪ Examples of Pilot State CVISN Program Plans and other documents
▪ White Papers and Fact Sheets on ITS/CVO Projects
▪ Credentialing Interface (CI) Design Document
▪ Electronic Data Interchange (EDI) Standards and Implementation Guides
▪ Dedicated Short Range Communication (DSRC) Standards
▪ Interoperability Test Strategy
▪ Interoperability Test Suite Package
▪ Sample Test Plans
▪ CVISN Glossary.

Table 8-3 CVISN Tool Kit Content (Con't)

SAFER and CVIEW
▪ SAFER System Overview ▪ SAFER Project Plan ▪ SAFER/CVIEW User and System Requirements Document ▪ SAFER/CVIEW Logical and Physical Requirements Document ▪ Snapshot White Paper (SAFER and CVIEW) ▪ SAFER Master Test Plan ▪ SAFER O&M Plan ▪ CVIEW Information Package ▪ CVIEW Requirements Document ▪ CVIEW Design Document ▪ CVIEW O&M Plan.
Spreadsheets and Other Tools
▪ Technical and Administrative Point of Contact Information ▪ Planning and Design Worksheets ▪ Representative System Flow ("Thread") Diagrams (Templates and Examples) ▪ WWW Access Links.

8.4 CVISN Guides

The CVISN guides are a series of documents intended to serve as a way for those who have traveled a path to pass knowledge on to others who may travel the same (or a similar) path. These guides will provide a means for advising future CVISN deployment state personnel on how to make use of what was already developed and learned during the CVISN model deployment initiative.

JHU/APL has collected material for the guides from a number of sources. These sources include the partners in the CVISN MDI, the workbooks developed for the CVISN Pilot Workshops and Conferences, lesson learned sessions conducted during the MDI, and textbooks and other reference material. The guides include hints, tips, and potential pitfalls from the "front line" - those people actually implementing these improved systems.

Each of these guides will address a process (e.g., planning) or an application area (e.g., electronic screening). Each guide will be concise, with references to textbooks and other documents for details, as appropriate.

What Guides Are Available?

A series of eight guides will be available by the spring of 2000. The guides can be grouped into three categories.

- Management Guides
  - Introductory Guide to CVISN (this document)
  - Program and Project Planning
  - Phase Planning and Tracking.
- Technical Process Guides
  - Top-Level Design
  - Integration and Test.
- Technical Application Guides
  - Safety Information Exchange
  - Credentials Administration
  - Electronic Screening.

What is the Scope of Each Guide?

The **management guides** describe how to apply proven project management methods to organize and execute a state CVISN deployment project:

📖 Introductory Guide to CVISN – provides an introduction to CVISN and the CVISN deployment process. Summarizes the resources available to states to help in the deployment process.

- Guide to Program and Project Planning – describes a comprehensive State CVISN Program Plan and a planning process. Provides guidance on how to tailor the plan and process to your situation, ideas on how to develop the plan, and possible tools to help with the process.
- Guide to Phase Planning and Tracking – describes what would be in a State CVISN Phase Plan and its associated development process. Provides guidance on how to tailor the plan and process to your situation, ideas on how to develop the plan, and possible tools to help with the process.

The **technical process guides** describe how to apply system engineering methods to the problem of designing, testing, and integrating CVISN Level 1 capabilities in as state:

- Guide to Top-Level Design – describes best practices for developing a top-level design for the systems necessary to implement CVISN Level 1 capabilities, and provides guidance on how to utilize the experience and products coming out of the CVISN MDI and other ITS/CVO initiatives.
- Guide to Integration and Test – describes the integration and test process and what would be in a comprehensive Integration and Test Plan (including test specifications, test scenarios, test data, etc.). Provides guidance on how to tailor the plan and process to your situation, ideas on how to develop the plan, and possible tools to help with the process.

The **technical application guides** address how to apply the National ITS Architecture and the experience gained from the CVISN MDI and other ITS/CVO initiatives to a particular CVISN Level 1 application area:

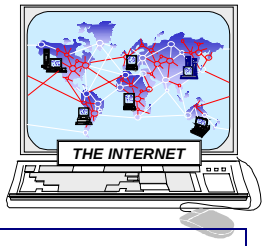
- Guide to Electronic Screening – describes the state of the practice in electronic screening systems, and provides guidance on how to design your electronic screening systems based on the experience and products coming out of the CVISN MDI and other ITS/CVO initiatives.
- Guide to Credentials Administration – describes the state of the practice in credentials administration systems, and provides guidance on how to design your credentials administration systems based on the experience and products coming out of the CVISN MDI and other ITS/CVO initiatives.
- Guide to Safety Information Exchange – describes the state of the practice in safety information exchange systems, and provides guidance on how to design your safety information exchange systems based on the experience and products coming out of the CVISN MDI and other ITS/CVO initiatives.

Guide scope and structure will vary depending on the type of guide and specific subject. Typically, each guide will address questions such as:

- What is it? (The “it” refers to the subject of the guide.)
- Who does it benefit?
- How does it fit into the big picture?
- What are the governing concepts?
- What standards, designs or systems already exist?
- What process is recommended?
- What alternatives should be evaluated?
- What is required to conform to FMCSA guidance?
- What are the CVISN model deployment states doing and what have they learned?
- What resources are available to help?

8.5 ITS/CVO World Wide Web Sites

A CVO site on the World Wide Web (WWW) is maintained by JHU/APL at:



☞ http://www.jhuapl.edu/cvo/

This site provides planning and technical information for the CVISN Program and is used to distribute program documentation for review and use. Most of the documents produced by JHU/APL (e.g., EDI Implementation Guides, CVISN Guides) are available on this web site.

FMCSA also maintains an excellent site containing news and reports related to ITS/CVO:

☞ http://www.avalon-ais.com/itscvo/main.htm

Other WWW sites that are good sources of planning and background information for ITS/CVO include:

☞ *Other WWW ITS/CVO Sites:*

- Federal Highway Administration: http://www.fhwa.dot.gov
- ITS Electronic Document Library http://www.its.fhwa.dot.gov/cyberdocs/welcome.htm
- ITS Joint Program Office: http://www.its.dot.gov
- ITS Cooperative Deployment Network (ICDN): http://www.nawgits.com/jpo/icdn.html
- ITS America: http://www.itsa.org
- National Governors' Association: http://www.nga.org
- University of Kentucky Transportation Center: http://cvoz.uky.edu
- CVO Work Group: http://www.gcmpic.ai.uic.edu/cvogrp/cvo.html
- Center for Transportation Research and Education, Iowa State University: http://www.ctre.iastate.edu/projects/attech/midwest
- The Oak Ridge National Laboratories Technology Truck: http://www.ornl.gov/dp111/index.htm

8.6 Advisory Support

A variety of technical and administrative experts are available to assist the states in achieving their CVISN goals. These include:

- JHU/APL CVISN project managers and architecture and standards experts
- Experienced personnel from the Model Deployment (Prototype and Pilot) States, including state project managers, system architects, and functional managers
- ITS/CVO specialists from the FHWA Division Offices and FMCSA Service Centers
- Personnel from FHWA Headquarters
- ITS/CVO trainers and CVISN State Advisors (CSAs)
- ITS America staff
- Motor carrier associations staff [American Trucking Associations (ATA), National Private Truck Council (NPTC), Owner-Operator Independent Driver Association (OOIDA) and others)]
- State associations staff [American Association of Motor Vehicle Administrators (AAMVA), Commercial Vehicle Safety Alliance (CVSA), International Registration Plan (IRP) Inc., International Fuel Tax Agreement (IFTA) Inc., and others)]
- Private consultants.

Advisory Support

8.7 Outreach and the FMCSA Technology Truck

ITS/CVO Technology Truck

☞ http://www.ornl.gov/dp111/index.htm

The FMCSA is conducting several activities to increase the awareness of ITS/CVO in the stakeholder community. These include:

- Motor Carrier Industry Awareness Seminars
- ITS/CVO Brochures
- Technology Truck – A national demonstration vehicle containing ITS/CVO technologies, classroom-type facilities, and informational kiosks.

8.8 How Do the Workshops, Guides, and COACH Fit Together?

The CVISN Deployment Workshops, guides, and COACH have all been designed to work together to help lead a state through the deployment process. Figure 8-2 shows the relationships of these elements.

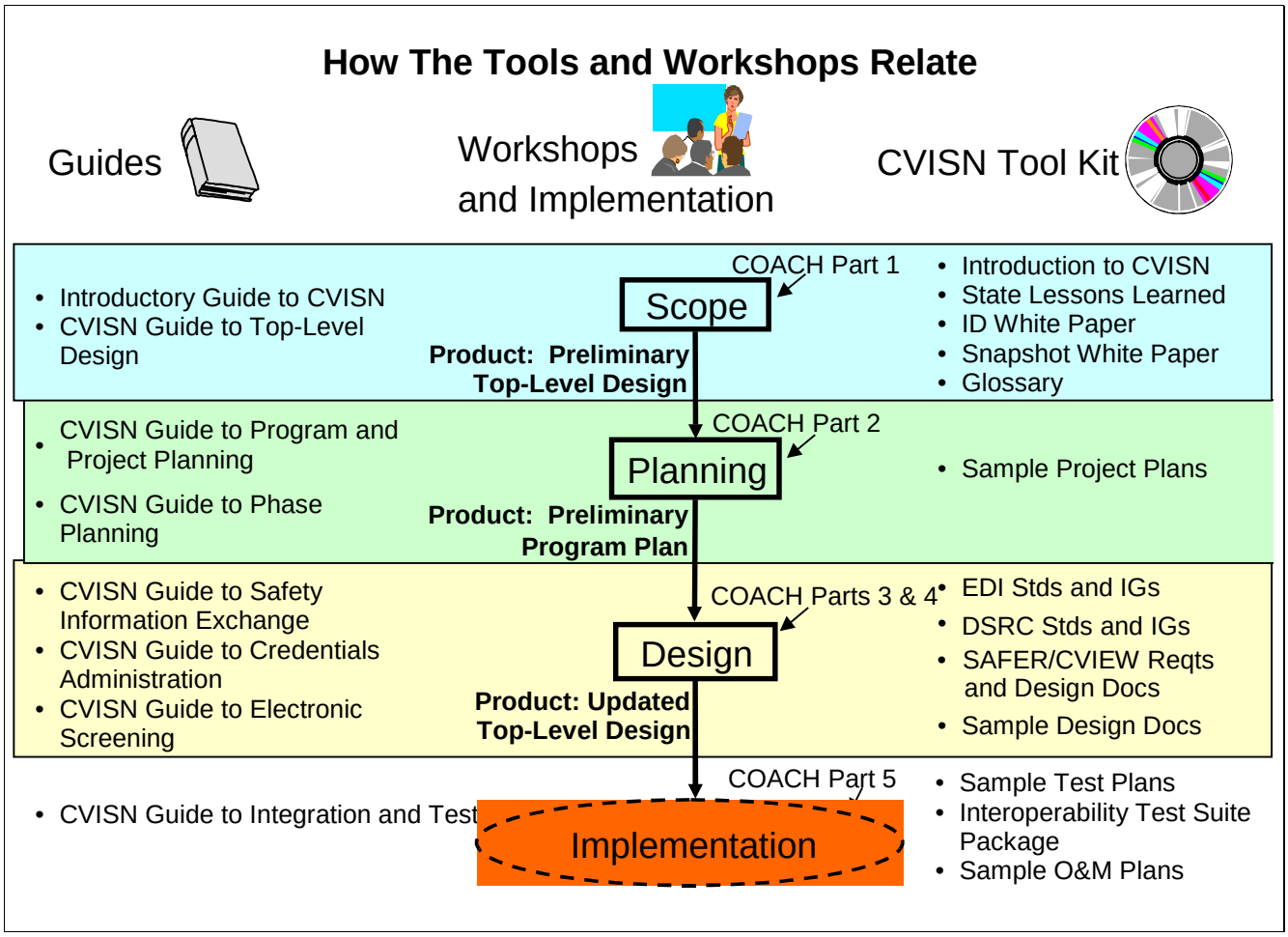


Figure 8-2 Relationship Between Tools and Workshops